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EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

10

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/430,297

Applicant(s)

SCOTT, MARK

Examiner

Robert W Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8. 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1.0 The application of Mark Scott for a "SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR POINT-TO-POINT BANDWIDTH CONSERVATION IN AN IP NETWORK" filed on October 29, 1999 and amended on April 18, 2003 was examined. Claims 1-22 are pending.

### *Foreign Priority*

2.0 Foreign Priority was not claimed.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3.0 Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999)

Referring to Claim 1, Goldberg teaches: reducing overhead (reduce header information per Abstract); latency (latency per Abstract); handling packet loss (frame loss detection per col 4 line 53); voice and data over Internet Protocol (VoIP) data packet (Fig 4); transmitting between originating and destination gateways in an Internet telephony system (Fig 4) ;

(1) Compressing data streams (col 4 line 23) from a plurality of concurrent calls (30 channel of concurrent calls per col 4 line 48) into packets (larger packet per col 4 line 48. The MUX shown in Fig 3-4 performs the compression);

(2) Aggregating packets into the larger packet (larger packet, ie. A Super Packet per col 4 line 45);

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Synchronizing a current channel state at the originating gateway with a record of said channel state at the destination gateway (The applicant defines synchronizing on Pg 11 line 27-Pg 12 line 5 of the disclosure. Control bits are provided to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) between the Gateways)

(3) Transmitting data packets between originating and destination through a single virtual connection (Fig 4 shows Super Packets flowing over virtual connections between the MUXes 230a and 230b respectively. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41; therefore, the virtual connections would be between the gateways shown in Fig 4);

**In Addition:**

Wherein step (2) further comprises the step of providing a plurality of data frames and a plurality of header frames in the data packet, wherein said plurality of header frames comprises at least one header frame selected from the group consisting of a time stamp header, local network header, IP address header and UDP header and at least one header frame selected from the group consisting of a version number header and control information header (SuperPacket per col 4 line 45 whose header frame is UDP per Fig 1 and comprising at least two header frames : version (Fig 1) and channel (col 4 line 54) or control) as claimed in Claim 2.

Wherein step (1) further comprises the step of converting analog to digital prior to compressing (Fig 4 shows PSTN Gateway or analog into the VoIP Gateway wit VoIP packet coming out; therefore, converting analog to digital) as claimed in Claim 3.

Wherein step (2) further comprises the step of providing information in the data packet to instruct the destination gateway to start using said record to deframe the data packet (Control bit are provided which specify the number of packets per col 4 lines 55-56 or instructions on deframing) as claimed in Claim 20.

Goldberg does not expressly call for: synchronizing or a current channel state at the originating gateway with a record of said channel state at the destination gateway but teaches providing control bits between the gateways for providing coordination or synchronization or state (Control bits are provided to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) between the Gateways)

It would be obvious to one of ordinary skill in the art at the time of the invention that providing control bits to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) or providing state between the Gateways performs the same function as synchronization or coordination or state of the channels define by the applicant on Pg 11 line 27-Pg 12 line 5 of the disclosure.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**4.0** Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999 ) in view of Lewis (U.S. Patent No.: 6,442,169B1)

Referring to Claim 4, Goldberg teaches: The method of Claim 1, further comprising the step of transmitting a check sequence data packet at regular packet intervals (UDP CHECKSUM or HEADER CHECKSUM per Fig 1), wherein the duration of said intervals is altered to reach a desired tradeoff between increased tolerance to loss and bandwidth (This limitation has a broad meaning. The examiner interprets this to mean that it is within the level of one skilled in the art to vary parameters. It is also well known to one of ordinary skill in the art that there is a trade off associated amount of error correction and bandwidth required to implement the bandwidth correction. Goldberg teaches varying the number of packets sent in a Superpacket and sequence number for frame loss detections per col 4 lines 51-67, wherein a parity system and the information located inside said check sequence data packet (HEADER CHECKSUM or UDP CHECKSUM per Fig 1)

Goldberg does not expressly call for: regenerating missing or damaged data in previously transmitted data packets.

Lewis teaches: regenerate missing or damaged data in previously transmitted data packets (col 24 lines 58-col 25 line 20)

It would be obvious to add the error detection and regeneration of missing or damaged data of Lewis to the gateways of Goldberg because Goldberg's gateways utilized UDP which is a subset of the TCP/IP protocol suite and Lewis is just defining how TCP inherently performs error detection and correction.

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5.0** Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (U.S. Patent No.: 6,442,169B1)

Referring to Claim 5, Lewis teaches: A method for regenerating missing or damaged data in a data packet transmitted (TCP per col 24 line 58-col 25 line 20) in Internet telephony system (120 and 130 per Fig 3 or 160 and 170 per Fig 4 or Internet Telephony system);

(1) Transmitting a check sequence after transmission of after every third data packet, wherein the information located inside of said check sequence data packet is used to regenerate missing or damaged data in any of the preceding three data packets (This limitation can be broadly interpreted. Lewis teaches that TCP performs regeneration and error correction on missing packets in order to guarantee delivery per col 24 line 58-col 56 line 20 which can be interpret that parameters can be adjusted as long as delivery is guaranteed.)

(2) using a parity system to regenerate the missing or damaged data (col 24 line 58-col 56 line 20)

Lewis does not expressly call for: check sequence after transmission of after every third data packet but teaches that a "TCP breaks the message down into IP packets and uses CHECKSUM error checking logic to guarantee deliver per col 25 lines 5-7. The examiner interprets this to mean that TCP is providing error correction after each packet or whatever is required to guarantee delivery.

It would be obvious to one of ordinary skill in the art at the time of the invention that performance of error checking after each packet meets the limitation of checking after every three packets; furthermore, it is within the level of one skilled in the art to adjust parameters or to adjust the transmission of check sequence so that is performed after every third packet as long as the message is corrected and delivered in accordance with Lewis per col 25 lines 5-7

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6.0** Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg

(U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999 )

Referring to Claim 6, Goldberg teaches: A system for reducing overhead (reduce header information per Abstract); latency (Abstract); voice and data over Internet Protocol (VoIP) data packet (Fig 4); transmitting over UDP connectionless protocol ( col 3 lines 10-17) between originating and destination gateways (Fig 4) ;

Media framing means for aggregating packets from a plurality of concurrent calls from a plurality of channels into the larger packet (The MUX shown in Fig 3 and 4 performs compression or aggregating of plurality of concurrent calls or channels by compressing data streams per col 4 line 23 from a plurality of concurrent calls; such as, 30 channel of concurrent calls per col 4 line 48 into larger packets per col 4 line 48. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41)

Transmission control means for providing information in the data packet to synchronize a current channel state at the originating gateway with a record of said channel state at the destination gateway (The applicant defines synchronizing on Pg 11 line 27-Pg 12 line 5 of the disclosure. Control bits are provided to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing or record or channel state (col 4 line 61) between the Gateways)

Redundancy means for regenerating missing or damaged data in the data packet (HEADER CHECKSUM or UDP CHECKSUM per Fig1)

Single virtual connecting means for transmitting the data packet from the originating gateway to the destination gateway (Fig 4 shows Super Packets flowing over virtual connections between

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the MUXes 230a and 230b respectively. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41; therefore, the virtual connections would be between the gateways shown in Fig 4);

**In Addition:**

Wherein the data packet comprises a plurality of data frames and a plurality of header frames comprising at least one header frame selected from the group consisting of a time stamp header, local network header, IP header and UDP header and at least two header frame selected from the group consisting of a version number header and control information (SuperPacket per col 4 line 45 whose header frame is UDP per Fig 1 and comprising at least two header frames : version (Fig 1) and channel (col 4 line 54) or control) as claimed in **Claim 7**.

Further comprising: means for transmitting a check sequence data packet after every third transmission (200a or 200b per Fig 3 or per HEADER CHECKSUM or UDP CHECKSUM per Fig 1);

Means for converting analog streams to digital data streams (200a or 200b per Fig 3);

Means for compressing digital data streams into said packets (200a or 200b per Fig 3);

Means for transmitting a check sequence data packet after the transmission of every third data packet (200a or 200b per Fig 3 or per HEADER CHECKSUM or UDP CHECKSUM per Fig 1) as claimed in **Claim 8**

Wherein said single virtual connecting means enable transmission of the data packet from said media framing means at the originating gateway directly to a second media framing means at the destination gateway (Fig 4 shows Super Packets flowing over virtual connections between the MUXes 230a and 230b respectively. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41; therefore, the virtual connections would be between the gateways shown in Fig 4 thereby enabling the transmission of the data packet to be sent directly from the originating gateway directly to the destination gateway which has a second media framing means) as claimed in **Claim 21**

Wherein said single virtual connecting means enables transmission of the data packet from said transmission control means at the originating gateway directly to a second transmission control means at the destination gateway ( Fig 4 shows Super Packets flowing over virtual connections between the MUXes 230a and 230b respectively. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41; therefore, the virtual connections would be between the gateways shown in Fig 4 thereby enabling the transmission of the control data bits per col 4 lines 51-67 to be sent directly from the originating gateway directly to the destination gateway) as claimed in **Claim 22**.

Goldberg does not expressly call for synchronizing or current channel state at the originating gateway with a record of said channel state at the destination gateway but teaches providing control bits between the gateways (Control bits are provided to indicate the available



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number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) between the Gateways)

It would be obvious to one of ordinary skill in the art at the time of the invention that providing control bits to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) or channel state between the Gateways performs the same function as synchronization of the channel state as defined by the applicant on Pg 11 line 27-Pg 12 line 5 of the disclosure.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**7.0** Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999 ) in view of Lewis (U.S. Patent No.: 6,442,169B1)

Referring to Claim 9, Goldberg teaches: The method of Claim 8, wherein said check sequence data packet is formatted to regenerate said missing or damaged data with information located inside of said check sequence data packet per (Fig 1)

Goldberg does not expressly call for: regenerating missing or damaged data in previously transmitted data packets.

Lewis teaches: regenerate missing or damaged data in previously transmitted data packets (col 24 lines 58-col 259)

It would be obvious to add the error detection and regeneration of missing or damaged data of Lewis to the gateways of Goldberg because Goldberg's gateways utilized UDP which is a subset of the TCP/IP protocol suite and Lewis is just defining how TCP inherently performs error detection and correction.

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*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8.0** Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (U.S. Patent No.: 6,442,169B1)

Referring to Claim 10, Lewis teaches: Internet telephony system for regenerating missing or damaged data packet (120 and 130 per Fig 3 or 160 and 170 per Fig 4)

Redundancy means for transmitting a check sequence data packet after every three or more data packets (This limitation can be broadly interpreted. Lewis teaches that TCP performs regeneration and error correction on missing packets is performed as required to guarantee delivery or after every three packets per col 24 line 58-col 56 line 20.)

Means for regenerating the missing or damaged data with the information located inside of said check sequence data packet (This limitation can be broadly interpreted. TCP provides the capability per col 24 line 58-col 25 line 20).

**In Addition:**

Further comprising means for implementing a parity system to regenerate said missing or damaged data (This limitation can be broadly interpreted. TCP provides the capability per col 24 line 58-col 25 line 20) as claimed in **Claim 11**.

Lewis does not expressly call for: regeneration of data within the check sequence data packet but teaches that the message are broken into IP packets with CHECKSUM error checking logic and that the delivery of the message is guaranteed per col 25 lines 1-9.

It would be obvious to one of ordinary skill in the art at the time of the invention that performance of error checking with guaranteed delivery performs the same function as regeneration of data utilizing the information within the check sequence data packets

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**9.0** Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg

(U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999)

Referring to Claim 12, Goldberg teaches: A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling originating and destination gateways to transmit and receive data streams or data packets in an Internet telephony system (Col 6 line 41-col 7 line 41) and for reducing VOIP packet overhead (reduce header information per Abstract) and latency (latency per Abstract) and handling packet loss (frame loss detection per col 4 line 53);

A first computer program product (Col 6 line 41-col 7 line 41) means for compressing data streams (col 4 line 23) from a plurality of concurrent calls (30 channel of concurrent calls per col 4 line 48) into packets (larger packet per col 4 line 48. The MUX shown in Fig 3-4 performs the compression);

A second computer program product (Col 6 line 41-col 7 line 41) means for aggregating packets into the larger packet (larger packet, ie. A Super Packet per col 4 line 45);

A third computer program product (Col 6 line 41-col 7 line 41) means for transmitting data packets between originating and destination through a single virtual connection (Fig 4 shows Super Packets flowing over virtual connections between the MUXes 230a and 230b respectively. The MUXes can be integrated into the router and Gateway per col 7 lines 33-41; therefore, the virtual connections would be between the gateways shown in Fig 4);

A fourth computer program product (Col 6 line 41-col 7 line 41) means for synchronizing a current channel state at the originating gateway with a record of said channel state at the destination gateway (The applicant defines synchronizing on Pg 11 line 27-Pg 12 line 5 of the disclosure. Control bits are provided to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) between the Gateways. It would be obvious to one of ordinary skill in the art at the time of

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the invention that providing control bits to indicate the available number of number of packets in a Super Packet multiplexed per col 4 lines 51-67 which is coordinating or synchronizing (col 4 line 61) between the Gateways performs the same function as synchronization of the channels define by the applicant on Pg 11 line 27-Pg 12 line 5 of the disclosure)

A fifth computer program product (Col 6 line 41-col 7 line 41) means for determining if the data packets contain missing or damaged data (col 4 line 51-67 or per Fig 1)

**In Addition:**

Wherein said program product said second computer program product means further comprises computer program product means for aggregating packets (200a or 200b per Fig 3 and per col 6 line 41-col 7 line 4) comprising a plurality of data frames, wherein said header frames comprises at least one header frame selected from the group consisting of a time stamp header, local network header, IP address header and UDP header and at least one header frame selected from the group consisting of a version number header and control information header (SuperPacket per col 4 line 45 whose header frame is UDP per Fig 1 and comprising at least two header frames : version (Fig 1) and channel (col 4 line 54) or control) as claimed in Claim 13.

Wherein said first computer program product means further comprises computer program product means (col 6 line 41-col 7 line 4) for converting analog to digital prior to compressing (Fig 4 shows PSTN Gateway or analog into the VoIP Gateway with VoIP packet coming out; therefore, converting analog to digital) as claimed in Claim 14.

Goldberg does not expressly call for: regenerating missing or damaged data in the data packets but teaches frame loss detection per col 4 line 53.

Lewis teaches: regenerating missing or damaged data in the data packets (col 24 line 58-col 25 line 20)

**In Addition:**

Wherein said fifth computer program product means further comprises computer program product for transmitting a check sequence data packet after every three data packets and using a parity system and information located inside of said check sequence data packet to regenerate sad missing data ( It is within the level of one skilled in the art to implement the algorithms into hardware and software. It would also be obvious to store the software on a computer readable medium. Lewis teaches that a "TCP breaks the message down into IP packets and uses CHECKSUM error checking logic to guarantee deliver per col 25 lines 5-7. The examiner interprets this to mean that TCP is providing a CHECKSUM after each packet which exceeds the limitation of every third packet; furthermore, it is within the level of one skilled in the art to

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adjust parameters or to adjust the transmission of check sequence so that is is performed after every third packet as long as the message is corrected and delivered) as claimed in Claim 15.

It would be obvious to add the error detection and regeneration of missing or damaged data of Lewis to the gateways of Goldberg because Goldberg's gateways utilized UDP which is a subset of the TCP/IP protocol suite and Lewis is just defining how TCP inherently performs error detection and correction.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**11.0** Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (U.S.

Patent No.: 6,442,169B1)

Referring to Claim 16, Lewis teaches: A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling originating and destination gateways to transmit or received data streams or data packets in an Internet telephony system and for regenerating missing or damaged data in the data packets comprising: (It is within the level of one skilled in the art to program the TCP error correction algorithms into a computer hardware and and software performed by 120 and 130 per Fig 3 or 160 and 170 per Fig 4. It would further be obvious to one of ordinary skill in the art at the time of the invention to store the software on a computer readable medium)

A first computer program product means for transmitting a check sequence data packet at regular packet intervals wherein the duration of said intervals is altered to reach a desired tradeoff between increased tolerance to loss and bandwidth (It is within the level of one skilled in the art to program the TCP error correction algorithms into a computer hardware and software performed by 120 and 130 per Fig 3 or 160 and 170 per Fig 4. It is also well known within the art that increasing the number of times that error checksums are sent increases receiving correct data at the cost of bandwidth; furthermore, this claim limitation does not specify what is causing the alteration. The examiner is interpreting this to mean that one of the level of skilled in the art can adjust parameters. The specification states on Page 15 lines 6-8 that "System 100 can be

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configured to alter the packet interval from 1 to N to reach the desired tradeoff to loss and bandwidth". It is within the level of one skilled in the art to adjust an interval or tweak a parameter or change the interval as which error checksums are sent. Lewis teaches that error check sums are sent and the message is guaranteed delivery per col 24 line 58-col 25 line 20)

A second computer program product means for regenerating the missing or damaged data in a previously transmitted data packet by using information inside of said check sequence data packet (This limitation can be broadly interpreted. It is within the level of one skilled in the art to program the TCP error correction algorithms into a computer hardware and software performed by 120 and 130 per Fig 3 or 160 and 170 per Fig 4. TCP provides the capability per in order to guarantee delivery of messages per col 24 line 58-col 25 line 20).

**In Addition:**

Further comprising a third computer program product means for implementing a parity system to regenerate said missing or damaged data (This limitation can be broadly interpreted. It is within the level of one skilled in the art to program the TCP error correction algorithms into a computer hardware and software performed by 120 and 130 per Fig 3 or 160 and 170 per Fig 4. TCP provides the capability per col 24 line 58-col 25 line 20) as claimed in Claim 17.

Lewis does not expressly call for: a first and second computer program product but teaches the algorithms associated with TCP error correction per col 24 line 58-col 25 line 20)

It would be obvious to one of ordinary skill in the art at the time of the invention to program the TCP algorithms taught per col 24 line 58-col 25 line 20 into a computer program products.

***Claim Objections***

**12.0** Claims 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The closest prior art is Goldberg (U.S. Patent No: 6,389,038) dated May 14, 2002 and Lewis (U.S. Patent No.: 6,442, 169B1). Goldberg (U.S. Patent No: 6,389,038) teaches compression internet packets, transmission of CHECKSUMs, and transmission of control bits

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which define the number of smaller packets in the Superpacket. Lewis (U.S. Patent No.: 6,442, 169B1) teaches TCP error detection and correction. Neither of these references teaches whether the channel is open or online; consequently, the following limitations would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims:

“wherein said channel state identifies whether a channel is open or on-line” as claimed in **claim 18.**

“wherein step (2) further comprises the step of providing in the data packet a channel present header for indicating whether a channel is currently open and communicating” as claimed in **Claim 19.**

### ***Conclusion***

**13.0** The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al., U.S. Patent No.: 4,970,714 dated Nov 13, 1990 which teaches error detection and correction at layer 2. It would be obvious to one of ordinary skill in the art at the time of the invention that this could be utilized in conjunction with TCP/IP which is a layer 3 and 4 protocol to perform error detection and correction.

Svanbro et al, U.S. Patent No.: 6,535,925 dated March 18,2003 which teaches header compression, error detection, and error correction utilizing checksums. This reference was not

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used because the November 9, 1999 which is based upon a provisional application was not earlier than the applicant's application date.

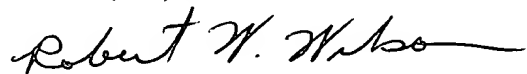
Mahler et al (U.s. Patent No.; 6,542, 504B1) dated April 1, 2000 which teaches compression and synchronization between the gateways by using a profile

Birdwell et al. (U.S. Patent No.: 6,032,197) dated February 29, 2000 which teaches header compression, error correction using checksum, and synchronizing between the gateways utilizing key bits.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Robert W Wilson  
Examiner  
Art Unit 2661

RWW  
May 15, 2003



DANG TON  
PRIMARY EXAMINER